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## ABSTRACT

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3       A programmable multiple current source includes a  
4       plurality of current source circuits each having current level  
5       data storage circuitry. A current level data input terminal  
6       and a control input terminal are connected to each current  
7       source circuit to supply current level data to the storage  
8       circuitry. Peak detector and storage circuitry is coupled to  
9       each of the output terminals of the current source circuits.  
10      Each associated current source circuit includes a master  
11      digital-to-analog converter coupled to the current level data  
12      storage circuitry, a driver circuit coupled to the digital-to-  
13      analog converter and to the associated current source circuit,  
14      comparator and storage circuitry having a first input coupled  
15      to the peak detector and storage circuitry and a second input  
16      coupled to the driver circuit, and current level adjustment  
17      circuitry coupled to the comparator and storage circuitry and  
18      the driver circuit.